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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/762,778 | 04/20/2001 | Anton Blaakmeer | 702-010062 | 7921 |

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EXAMINER

NGUYEN, SON T

ART UNIT PAPER NUMBER

3643

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,778

Applicant(s)

BLAAKMEER ET AL.

Examiner

Son T. Nguyen

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 12-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claim 15** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation of "wherein the ion-exchange agent has a non-clay like behavior with respect to swelling and shrinking" in claim 15 does not further limit claim 12, for in claim 12, this limitation has been claimed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 12,13-16,19-22,25,26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen et al. (GB1336426) in view of Clausen (WO 91/08662).

For claims 12 & 15, Jorgensen et al. disclose a mineral wool plant substrate comprising a coherent matrix of mineral wool (page 1, line 9), a cured binder (page 2, lines 71-72 and page 3, lines 5-10)), wherein the coherent matrix is formed by collecting a layer of mineral wool fibers that is cured by the binder (page 2, lines 71-72, page 3, lines 5-10 and 52-55), said cured binder fixing the fibers to one another so that they are substantially not displaceable relative to one another (page 2, lines 117-125). However,

Art Unit: 3643

Jorgensen et al. are silent about a quantity of an ion-exchange agent comprising an ion-exchange capacity of at least about 15 meq/100g dry weight, wherein the ion-exchange agent is present in a maximum amount of 20 volume % and has a stable structure, exhibiting a non-clay like behavior with respect to swelling and shrinking.

Clausen discloses a mineral wool plant substrate comprising a quantity of an ion-exchange agent (page 4, lines 10-22) and a quantity of an ion-exchange agent (page 4, lines 10-22) having a stable structure, exhibiting a non-clay like behavior with respect to swelling and shrinking. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ ion-exchange agent as taught by Clausen in the substrate of Jorgensen et al. because the agent has a good ability to adsorb nutrients (page 4, lines 13-15 of Clausen).

Jorgensen et al. as modified by Clausen is silent about various capacities or amount of ion-exchange agent used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use ion-exchange agent with at least about 15 meq/100g dry weight wherein the ion-exchange agent is present in a maximum amount of 20 volume % in the substrate of Jorgensen et al. as modified by Clausen, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

For claims 13 & 14, in addition to the above, Clausen teaches lignite (page 4) which is a soil mineral and is a cation-exchange agent (as defined by Applicant's specification, page 3, line 10). It would have been obvious to one having ordinary skill in

Art Unit: 3643

the art at the time the invention was made to employ lignite as taught by Clausen in the substrate of Jorgensen et al. as modified by Clausen because lignite has a good ability to adsorb nutrients (page 4, lines 13-15 of Clausen).

For claim 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ion-exchange agent has an average pore size of less than 25 gm in the substrate of Jorgensen et al. as modified by Clausen, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

For claim 19, in addition to the above, Clausen teaches clay (page 4, line 25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ clay as further taught by Clausen in the substrate of Jorgensen et al. as modified by Clausen because clay increase water retention and rewetting ability (page 4, lines 27-28 of Clausen).

For claim 20, Jorgensen et al. as modified by Clausen disclose the substrate being used as growing block (page 1, lines 45-56 of Jorgensen et al. and page 5 lines 9-11 of Clausen).

For claim 21, Jorgensen et al. as modified by Clausen disclose the substrate being a growing mat (page 1, lines 58-85 of Jorgensen et al. and page 4, lines 9-11 of Clausen).

For claim 22, see claims 12,14,19 for explanations.

Art Unit: 3643

For claims 25 & 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an ion-exchange capacity of about 30 meq/100g or 40 meq/100g dry weight in the substrate of Jorgensen et al. as modified by Clausen, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art.

4. **Claims 17 & 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen et al. as modified by Clausen as applied to claims 12,15 above, and further in view of Baron et al. (US 5081791).

For claim 17, Baron et al. disclose a plant substrate comprising mineral wool (col. 3, line 9) and zeolite (col. 3, line 7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ zeolite as taught by Baron et al. in the substrate of Jorgensen et al. as modified by Clausen in order to improve capillarity (col. 3, line 5 of Baron et al.).

For claim 24, since Baron et al. disclose zeolite (col. 3, line 7), it should display a stable cage-like structure because it is the same zeolite claimed by Applicants.

5. **Claims 18,23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen et al. as modified by Clausen as applied to claim 12 above, and further in view of Schnuda (US 5368626). Jorgensen et al. as modified by Clausen are silent about peat. Schnuda teaches a growth medium or substrate in which he employs peat together with mineral wool in the medium to provide a higher water retention medium (col. 1, lines 62-68). It would have been obvious to one having ordinary skill in the art at

Art Unit: 3643

the time the invention was made to employ peat as taught by Schnuda in the substrate of Jorgensen et al. as modified by Clausen in order to increase water retention in the substrate.


Response to Arguments

6. Applicant's arguments with respect to claims 12-26 have been considered but are moot in view of the new ground(s) of rejection. Also, the declaration of Anton Blaakmeer has been acknowledged but moot in view of the new ground of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Son T. Nguyen
Primary Examiner
Art Unit 3643

Application/Control Number: 09/762,778
Art Unit: 3643

Page 7

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